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ABSTRACT

This publication, part of a series entitled "Guide to Secondary Education in Europe," contains a brief description of secondary education in Denmark. The first section presents a general overview of the educational system, uppersecondary education, the transition from uppersecondary education to higher education, central government and uppersecondary education, the administration of uppersecondary schools, and private education. The second section describes the process of policy making and innovation, financing and budgeting, school and society, administration and organization of the education system, the school as an organization and as a community, the curriculum, evaluation and assessment, school staff, and international dimensions of the curriculum. The third section describes the efficiency and performance of secondary education as it traces the flow of a year group's path through different stages of the education system (1989/90). Section 4 discusses challenges, problems, and prospects of Danish education. Seven tables are included. (LMI)

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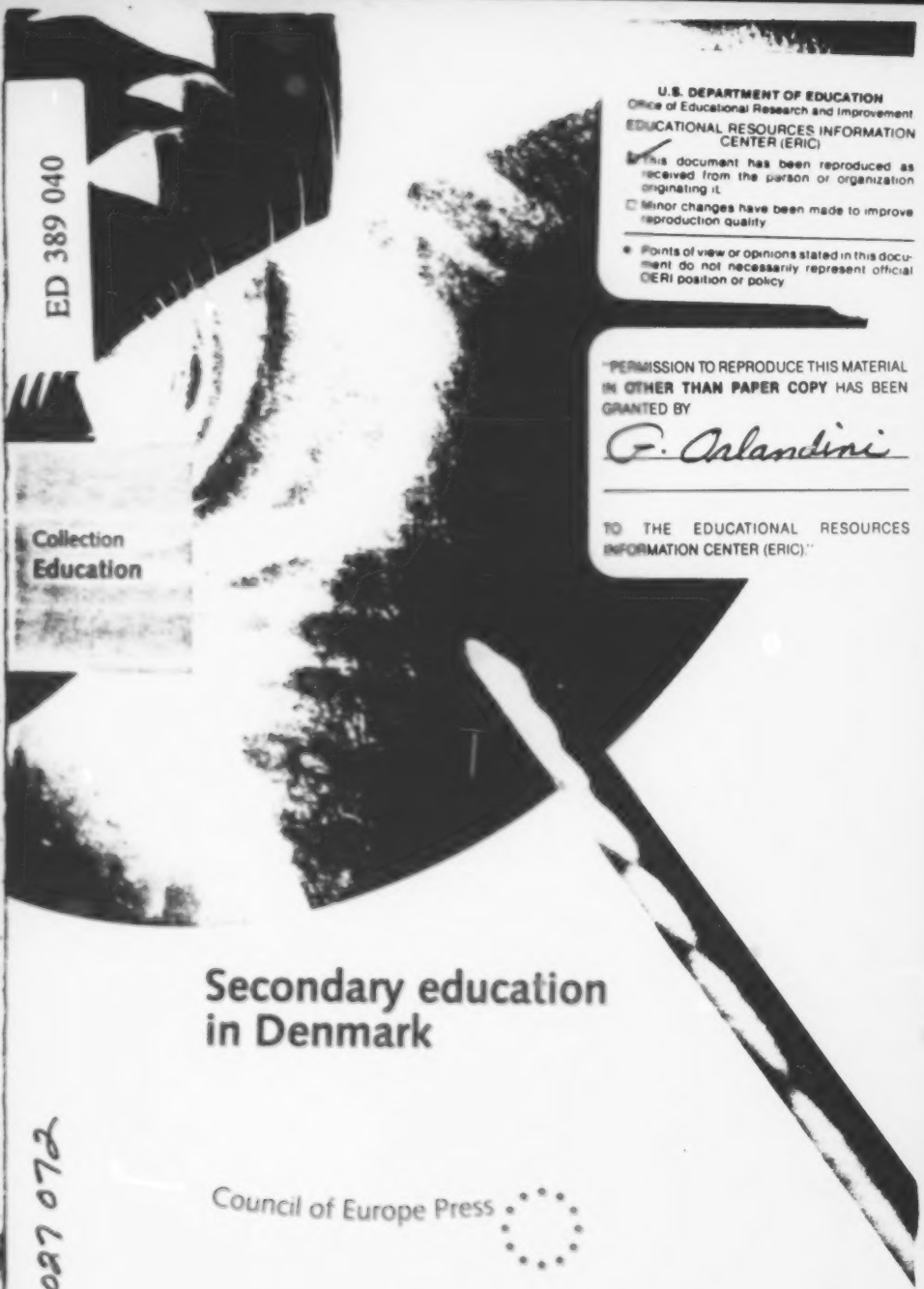

Secondary education in Denmark

Council of Europe Press

EA 027 072

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Secondary education in Denmark

by Steffen Jensen

Guide to secondary education in Europe
Editor Denis Kallen

A secondary education for Europe
Council for Cultural Co-operation

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The **Council of Europe** was founded in 1949 to achieve greater unity between European parliamentary democracies. It is the oldest of the European political institutions and has thirty-four member states,[1] including the fifteen members of the European Union. It is the widest intergovernmental and interparliamentary grouping in Europe, and has its headquarters in the French city of Strasbourg.

Only questions related to national defence are excluded from the Council of Europe's work, and the Organisation has activities in the following areas: democracy, human rights and fundamental freedoms; media and communication; social and economic affairs; education, culture, heritage and sport; youth, health, environment and regional planning; local democracy; and legal co-operation.

The **European Cultural Convention** was opened for signature in 1954. This international treaty is open to European countries that are not members of the Council of Europe, and it enables them to take part in the Organisation's programmes on education, culture, sport and youth. So far, forty-three states have acceded to the European Cultural Convention; the Council of Europe's full member states plus Albania, Belarus, Bosnia-Herzegovina, Croatia, the Holy See, Moldova, Monaco, Russia and Ukraine.

The **Council for Cultural Co-operation** (the CDCC) is responsible for the Council of Europe's work on education and culture. Four specialised committees – the Education Committee, the Standing Conference on University Problems, the Culture Committee and the Cultural Heritage Committee – help the CDCC to carry out its tasks under the European Cultural Convention. There is also a close working relationship between the CDCC and the regular conferences of specialised European ministers responsible for education, culture and cultural heritage.

The CDCC's programmes are an integral part of the Council of Europe's work, and, like the programmes in other sectors, they contribute to the Organisation's three overarching policy objectives for the 1990s:

- the protection, reinforcement and promotion of human rights and fundamental freedoms and pluralist democracy;
- the promotion of an awareness of European identity;

1. Andorra, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom

– the search for common responses to the great challenges facing European society.

The CDCC's education programme covers school, higher and adult education, as well as educational research. At present, its main priorities are projects on: the European dimension of secondary education; university co-operation; adult education and social change; modern languages; and the pooling of the results of educational research.

In 1991, the Council for Cultural Co-operation of the Council of Europe launched a project entitled "A secondary education for Europe". The aims of the project are to:

– give young people the knowledge, skills and attitudes they will need to meet the major challenges of European society;

– prepare young people for higher education, and for mobility, work and daily life in a multilingual and multicultural, democratic Europe;

– make young people aware of their common cultural heritage and their shared responsibilities as Europeans.

This project has two elements: the first devoted to reflections and consultations among the member states on the overall policies and strategies, and the second on the European dimension in the school curriculum.

The series entitled "Guide to secondary education in Europe" sets out to present in a synthetic form – country by country – the major elements of secondary education structures and policies that exist in CDCC member states.

Each guide has been written, on the basis of a common analysis, by experts designated by the authorities in each country concerned.

Denis Kallen has undertaken the difficult task of the general co-ordination of this series, guaranteeing its coherence and thus allowing comparisons to be made among countries.

Given that this is a field in which developments sometimes take place very quickly and are of an almost permanent nature, it is possible that, despite the considerable efforts made to take into account the latest reforms in the pipeline, certain changes may have taken place since the manuscript was originally received.

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I. General section

During the last decade, the development and the reform of the Danish educational system have been carried out in accordance with the following guidelines:

- steering by targets and frameworks instead of detailed regulations;
- increased market orientation with user-influence through boards at institutions, and the free choice of schools;
- switch-over to educational programmes with better employment prospects;
- focus on quality and internationalisation;
- educational programmes as open networks for the young and adults;
- more efficiency and places for more students for less money.

The efforts made, in particular, in the late 1970s to adapt the higher education courses to the needs of the labour-market have been carried on in the 1980s. But at the same time the planning strategy was replaced by a strategy based on target and framework control.

The aim of this fundamental change of the control philosophy and the control systems has, on the one hand, been to create more, better and cheaper study places with the limited financial resources available, on the other hand, the aim has been to promote the quality and relevance of education and to create both the basis for local freedom and the incentive to make use of this freedom.

The main point of view behind the reform has been that innovation and quality is best created by decentralising competence and responsibility to the educational institutions that supply the courses and the teaching, thus creating a certain competition between the institutions.

Target and framework control has been implemented partly by means of a reform of the financial control through the introduction of so-called "taximeter principles" for the appropriations, and partly by target and framework

control of the content and organisation of the courses. In both respects, the reforms entail a greater freedom for the institutions to govern themselves on more user-oriented conditions.

Other important elements of the reforms have been the endeavour to strengthen the management of the institutions and allow for a freer choice between courses and institutions. Without a strengthened local management willing to and capable of administering the greater freedom, which is a consequence of the target and framework control, the reforms will not function according to plan. Without a freer choice between courses and institutions for the users, the institutions will not have a sufficient incentive to develop the quality and relevance of the courses – which is one of the most important aims of the reforms.

1. The educational system

Education is compulsory for children between 7 and 16 years of age, namely nine years of compulsory education. In addition, there is a one-year preschool class and a tenth school year, which are both optional.

In 1971, the duration of compulsory education was extended from seven to nine years, and in 1975, a nine (or ten) year comprehensive school – the municipal school (the *Folkeskole*) – was introduced, and the middle school disappeared. The nine-year comprehensive school constitutes what in other countries is called primary and lower secondary education.

In principle, the *Folkeskole* education is comprehensive, the pupils remaining together as a class throughout their entire school career. Two courses of different content but with the same number of lessons per week, namely the basic and the advanced courses, are offered in mathematics, English and German in the eighth, ninth and tenth forms, and in physics/chemistry in the ninth and tenth forms.

According to the Constitution education in the *Folkeskole* is free of charge.

After compulsory education, pupils can choose between different kinds of secondary education:

- general upper secondary education;
- the higher preparatory examination courses;
- vocational education and training (barely ninety different courses in two different streams: commercial and technical);
- higher vocational examination courses (commercial and technical);

- social and health education courses;
- agricultural education;
- other types of vocational education.

A part of the *Folkeskole* is what in some countries is called lower secondary education. For this reason, the secondary education described in this book is what in other countries is called upper secondary education.

The main educational paths (namely the paths followed by the vast majority of pupils) are these:

- general upper secondary education;
- technical vocational education and training;
- commercial vocational education and training;
- the higher preparatory examination courses;
- the higher commercial examination courses;
- the higher technical examination courses.

2. Upper secondary education

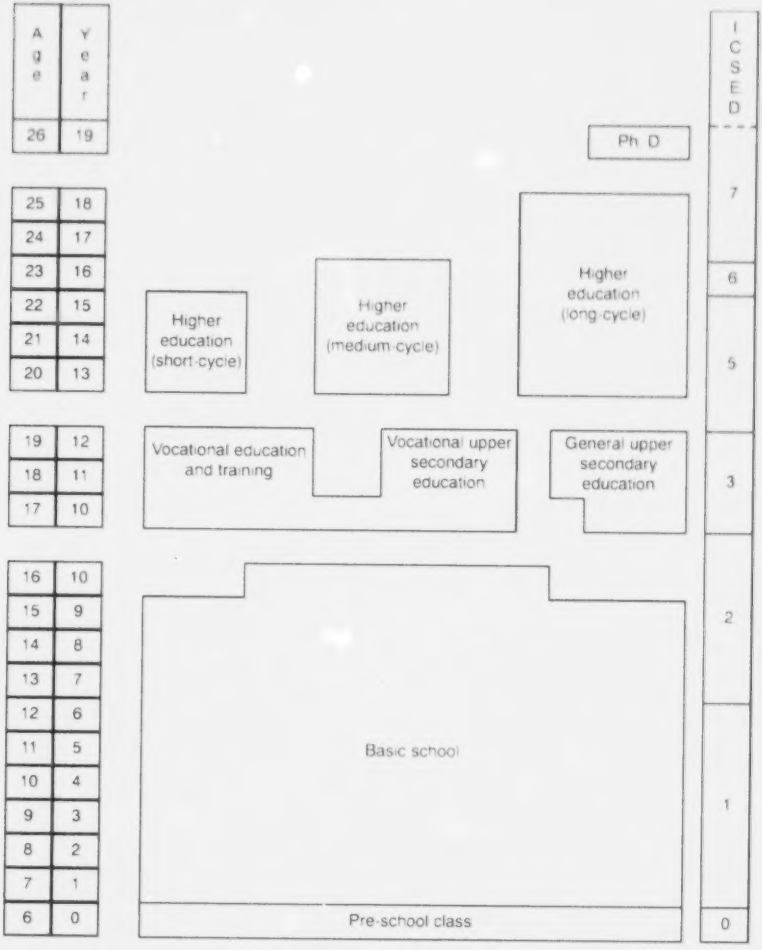
Upper secondary education is offered in different forms and at different types of institutions. There are two kinds of general upper secondary education. The first one, leading to the upper secondary leaving examination (*Studentereksamen*) is offered at general upper secondary schools (gymnasium) or courses preparing for the *studentereksamen*. The other one, the higher preparatory examination (HF), is offered in HF-courses. Commercial and technical schools offer courses for the higher commercial examination (HHX) and the higher technical examination (HTX) respectively.

The general upper secondary school (gymnasium)

The gymnasium has its origin in the cathedral and monastery schools established by the Catholic Church in the early Middle Ages; seven of the schools established in the eleventh and twelfth century are still in existence today. The medieval schools had, broadly speaking, only one purpose: to educate the servants of the Catholic Church. After the Reformation, which was officially implemented in 1536, the schools were taken over by the Crown, but their purpose was still to prepare the pupils for theological studies by teaching them to read, write and speak Latin and Greek, although it now was for the benefit of the Protestant Church.

This educational base was maintained almost unchanged until 1809 when the old "clergyman's school" in accordance with the spirit of the time, was transformed into a humanistic "civil servant" school, which was to "foster true humanity" through immersion in ancient Greek and Latin culture combined with some teaching of natural sciences and modern languages.

Diagram: The educational system



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The scientific and technical development of the nineteenth century lead in 1871 to a division of education into two branches; the linguistic branch and the mathematical-scientific branch. A division that is still the backbone of the gymnasium structure.

In 1903, Latin and Greek were replaced by English, German and French as the main subjects of the linguistic branch. At the same time, the gymnasium's three-year course for the upper secondary leaving examination (*Studentereksamen*) was with the municipal school through the establishment of the middle school (forms six to nine).

During the second half of this century the number of upper secondary schools has doubled. The present number is 141. One of these is a state school, eighteen are state-subsidised private schools and the rest are county schools.

Today, upper secondary schools and the two-year courses for the *Studentereksamen* are regulated by an Act of 13 June 1990 on Upper Secondary Schools. According to the act, the aim of the gymnasium and the courses is to provide a general education as well as to prepare the students for further studies. In the more intensive two-year course, some subjects are omitted (music, visual arts, and physical education and sports), and the number of weekly lessons is smaller than in the gymnasium. Although, as the pupils on the courses are older than in the gymnasium it is possible for the two kinds of pupil to pass the same examination.

Higher preparatory examination course (HF)

The higher preparatory examination was introduced in 1967 in a political climate of extending educational possibilities to new groups of society. Originally the idea was to create a two-year course aimed specifically at prospective candidates for teacher training.

However, there was concern that this concept might result in an educational cul-de-sac. So the course design was changed into an alternative route to further and higher education, formally (though it has to be said not always in reality) equivalent to the existing three-year course leading to the *Studentereksamen*.

The students entering the new HF courses were mainly adults. Although from the beginning, HF also appealed to young people who for social or personal reasons had not followed the straight route via the gymnasium to further education.

Thus, HF is the "sweeper" of the general upper secondary education level. In the gymnasium, there is (still) an over-representation of middle-class children

(50%/50%, male/female), whereas HF recruits its predominantly female students from a broader base of society.

Two-year HF courses are established at seventy-seven different places in the country – mostly at upper secondary schools and teacher training colleges, although a small number of independent HF-institutions also exist. In addition, the sixty adult education centres (VUC) offer, *inter alia*, single-subject HF instruction as well as single-subject upper secondary school instruction.

The HF courses come under the Act of 13 June 1990 on Higher Preparatory Examination Courses and on Single-Subject Courses Preparing Adults for Further Studies. According to the act, the aim of the course is to provide a general education for the young and adults as well as to prepare them for continued studies.

Higher commercial examination (HHX)

The HHX was started in 1888 on a private initiative at Niels Brock's Commercial School in Copenhagen with a structure that can, in the main, still be found in the course today. The range of subjects offered included both commercial and general subjects.

In 1920, the Rigsdag (the name of the parliament at that time) adopted the first commercial school act. It entitled, *inter alia*, the Niels Brock's Commercial School to call itself a "higher commercial school". This act introduced supervision of commercial school activities, and the higher commercial examination became a state-controlled examination.

In 1927, the first ministerial orders were issued regarding content of teaching, which, in essence, dealt with existing teaching. Until 1965, the Ministry of Trade regulated the courses, after which responsibility was transferred to the Ministry of Education.

The HHX did not qualify one for admission to universities and other higher education institutions in the university sector. The universities did not consider the general part of the course sufficient. It was not until 1972, after a revision of the contents and the introduction of more rigorous admission requirements, that the HHX was given the status of a university entrance examination.

At the beginning of the 1970s, the course was run by almost half of the Danish commercial schools, and just under 2 000 students graduated from the two-year course and almost 1 000 from the one-year course. The one-year course started as early as 1917, when it was reserved for those students who were not interested in going on to higher education. The one-year course is still in existence.

As of 1982, the course was offered by all commercial schools, and the number of students had increased to approximately 6 500 on the two-year course.

It is, in particular, within the last twenty years that the number of students has increased (approximately five-fold), and today the course is a comprehensive youth education course with a student intake of roughly 10 000 a year.

Higher technical examination (HTX)

The HTX course was established on an experimental basis in 1982. The reason for its establishment was a desire to contribute to a wider range of education and training possibilities following the first year of vocational education and training, and a desire to create a new and relevant way of access to higher education in the technical area. In this context, it was of some significance that fewer and fewer skilled workers continued at the engineering colleges, whereas the number of general upper secondary graduates increased significantly.

Another reason for establishing the HTX course on an experimental basis was the need to strengthen the status of technical schools. Broad education and training possibilities in schools were to provide broader and qualitatively better recruitment opportunities.

In 1982, the HTX experiment was carried out at technical schools in Soenderborg, Aalborg and Copenhagen. The first intake comprised approximately 100 students.

The pilot period lasted until the spring of 1988, after which the programme was evaluated and made permanent after minor adjustments had been made to the individual subjects. On the same occasion, the HTX course was granted the status of a qualifying examination and the graduates were now in principle placed on an equal footing with those from the gymnasium, and the higher preparatory examination (HF) and higher commercial examination (HHX) courses as far as access to higher education was concerned.

The higher commercial examination courses and the higher technical examination courses come under the Act of 13 June 1990 on Vocational Upper Secondary Education to the Higher Commercial Examination and the Higher Technical Examination. According to the act the aim of the courses is to provide a general education with specific emphasis on the trades and industries as well as to prepare students for further studies.

Vocational education and training

For more than 400 years the education and training of apprentices had been controlled by the guilds, until the Freedom of Trade Act in 1857 abolished the monopoly of the guilds. Local associations of trades and enterprises took over and established technical and commercial evening schools, where their apprentices could be taught the necessary theory behind their practical training. In 1889, the state stepped in and issued the first act on apprenticeship, regulating the rights and obligations of both apprentice and employer.

The revised act on apprenticeship from 1956 gave more influence to national trade committees composed of an equal number of representatives of employers' organisations and trade unions by giving them the authority to set the standards of the different apprenticeship programmes. Furthermore, evening education was replaced by day-school attendance, which was the cause of concentration and a substantial improvement in the quality of vocational schools and their equipment. At present there are approximately sixty technical schools and a similar number o' commercial schools.

Due to the decreasing interest among young people in apprenticeship schemes, a new system was introduced in the 1970s. According to this system – basic vocational education (EFG) – the pupils began their education with a full year – the basic year – of instruction at a technical or a commercial school, where they were introduced to a variety of trades and received more general education than traditional apprentices. After the basic year the pupils chose a trade and began – like the apprentices – a "sandwich" programme consisting of practical on-the-job training interspersed with periods of school attendance.

As it was impossible to obtain the necessary approval to abolish the apprenticeship system the two systems ran in parallel for more than ten years. It turned out, however, that this was a very costly solution, and in 1989 the Act on Vocational Education introduced a new system that unified the best of the apprenticeship system and the basic vocational education system; it came into force on 1 January 1991.

3. The transition from upper secondary education to higher education

General qualifications

The following examinations qualify one for admission to higher education:

- upper secondary school leaving examination (*Studentereksamen*);

- higher preparatory examination (*Højere forberedelseseksamen*, HF);
- higher commercial examination (*Højere handelseksamen*, HHX);
- higher technical examination (*Højere teknisk eksamen*, HTX).

Only a small percentage of the total number of applications for higher education come from candidates having completed HTX courses.

Inclusion, in the 1980s, of HHX and HTX courses in the group of general qualification examinations for higher education was a result of the policy to increase flexibility in the educational system.

Special qualifications

Possessing one of the general qualification examinations does not necessarily give one sufficient qualifications for university.

Special qualifications operate on two different levels: some are specific admission requirements that have to be fulfilled before admission; others are so called "study-start" requirements. The study-start requirements are not conditions for admission; they mark, however, the previous knowledge that the students are required to possess at the beginning of the course.

The first type of special admission requirement occurs when, for example, a student with a *Studentereksamen* decides to study one of the natural sciences; the student is obliged to pass an examination in one or more specially designed, preparatory natural science subjects before they can obtain admission.

The second type of special qualification required (the study-start requirements) occurs when, for example, a student with a mathematical upper secondary school leaving examination wishes to study theology or classical philology. The student must become proficient in Latin and Greek and in this case it can be done after admission has taken place.

The required additional examinations can all be taken as single subject upper secondary examinations at upper secondary schools. No statistical data on the number of additional examinations is available. No matter which of the four upper secondary examinations a student has passed, the number of additional examinations will be limited (normally up to two), and it is always possible to take examinations within one year.

Special qualification requirements (of the first type) may also consist of the following: admission to short-term higher education courses in the technical field, which are given at the technical vocational colleges, presupposes a pro-

fessional practical experience that candidates with a general upper secondary education who apply for these courses have not had. Before admission these candidates have to take a workshop course of half-a-year's duration or take HTX technical subjects at a higher level as single subjects.

However, as part of the four-year plan (1993-96), which the Minister of Education and the parties of the opposition agreed upon in June 1992, this scheme will be reformed in such a way that admission qualification requirements for every field of higher education will include study-start qualification requirements. The new scheme will take effect in 1995.

4. Central government and upper secondary education

The Danish Parliament lays down the overall targets and framework for the upper secondary level, including the gymnasium, the higher preparatory examination (HF), the higher commercial examination (HHX), and the higher technical examination (HTX).

The Ministry of Education issues curriculum and examination regulations. For the HTX and the HHX, guidelines are issued by advisory bodies (The HHX Council and The HTX Council), on which employees' and employers' representatives form the majority, but also head teachers, teachers and pupils are represented. Aims, syllabuses and examinations for each subject are laid down at central level. Room has, however, been made for schools and teachers to decide on the actual content of teaching. Students are also free to choose the optional subjects in which they want to specialise.

The Ministry of Education is responsible for controlling the quality of education. The management of individual educational institutions enjoy a high degree of real autonomy, and central control focuses its attention on the quality of the work through quality development projects, examination papers drawn up at central level, and general guidelines in written form and through advisory functions.

Complaints about educational matters are always addressed to the educational institutions in question, and problems are usually solved on a local level. The ministry is only involved when this is not the case.

5. The administration of upper secondary schools

The public general upper secondary schools and the HF courses are run and financed by the county council, which:

– establishes, runs and closes down schools and courses and sees to it that schools and courses have sufficient capacity to admit all qualified applicants;

– fixes the level of grants for schools' operational expenses and investments and the extent of special education;

– appoints the headmaster after having obtained the opinion of the ministry on the qualifications of the applicants and appoints and dismisses teachers and other members of staff on the recommendation of the headmaster;

– fixes the maximum number of classes of the school/course and the minimum number of students that the school/course is bound to admit;

– fixes the statutes of the school/course.

The commercial and technical schools that offer the higher commercial and the higher technical examination courses are independent institutions run by a board of directors, but financed by the government according to the "taximeter" system.

The "taximeter" system is part of the ministry's overall strategy – management by target and framework control. The main idea behind this strategy is that decisions on the implementation of study programmes are best made by the people directly faced with the problems, leaders and the boards of educational institutions.

The "taximeter" system is based upon the allocation of grants to the institutions according to their level of activity – a larger number of students implies a larger grant. Last year's budget has no influence on the size of the budget of the following year.

A key element of the "taximeter" system is the block grant principle. As long as the block grant is used for legitimate purposes, the institution is free to spend the money in accordance with its own priorities.

6. Private education

In the upper secondary field, private education only exists in general upper secondary education.

About 15% of the general upper secondary schools are private; namely, they are independent institutions run by a board of directors, but which have to fulfil the same requirements as far as the content of education and examination are concerned as the public schools. Private schools receive a state grant per pupil of about 80% of the costs of public schools.

Private schools cater for about 6% of the total number of pupils in general upper secondary education, but the proportion is decreasing. The reason for this, in all likelihood, is that the differences between public schools and private schools are very few and not related to the content of education. Many parents do not want to pay for what they can get for free in a public school.

II. Issues section

1. The process of policy-making and innovation

The responsibilities of parliament and government are described in section I of this guide.

As far as general upper secondary education (gymnasia and HF courses) is concerned the county councils (there are sixteen counties in Denmark) have economic and administrative responsibility as outlined in section I.

Before laws are proposed to parliament or executive orders are issued, all relevant parties are invited to give opinions, which often have a considerable influence on the final law or executive order. Among the parties asked for opinions are the teachers' unions, the headmasters' associations and the pupils' associations. It is only for vocational upper secondary education that formal advisory councils exist.

Curriculum development and the development of test and examinations are carried out by the ministry through the two departments dealing with upper secondary education and their subject advisers.

The project on content and quality development

Quality in education and how to measure it, how to improve it and how to preserve it has been on the international agenda for more than a decade. In the beginning, Danish educational authorities followed the debate from an observer's point of view. The reason was that the quality of Danish education was not seriously questioned in the national debate as:

- teachers were well educated and highly responsible;

- school acts were revised periodically so as to be up to date, and have always been passed in parliament with a considerable majority, which meant stability in the system – independent of changing governments and political parties;

- the Ministry of Education had a strong influence on the curriculum, at least in basic and upper secondary education;

– school-leaving examinations were controlled by the ministry and supervised by external examiners sent out by the Ministry;

– school buildings, equipment and teaching materials were generally of a good standard;

– education was considered important by politicians and the general public, and a fair amount of money from taxation was spent on education by general consent.

The cuts made in public expenditure and consequently the more intensive use of educational resources in the 1980s brought, however, the question of quality in education into focus. It became a matter of concern that the economic cut-backs might lead to a reduction in quality. In order to avoid this, the Minister of Education, in 1988, launched the project on content and quality development, which covered the entire educational system. In the beginning, the project was met with suspicion by a majority in the teaching profession. This was based on the fact that:

– they feared more control in their everyday work;

– they thought that the project was launched to serve as a justification for further serious cut-backs;

– they felt that their professional honour and integrity was being questioned.

Fortunately, the initial negative attitude has been considerably modified during the four years in which the project was developed in practice. The idea of analysing objectives and means at all levels has been widely accepted by those involved. The project is felt as a welcome opportunity for renewal and improvement not only at the institutional and national levels, but also at the personal level. It was decided that the education system and its qualities should be evaluated from three angles:

– horizontally: analysing each level of the system one by one;

– vertically: assessing the subjects as they are taught at primary, secondary and tertiary level with the emphasis on coherence and progression, and the transition from one level to another;

– institutionally: evaluation of individual institutions.

Four departments of the Ministry of Education (the departments responsible for primary and lower secondary education, upper secondary education, vocational education and higher education) were made responsible for the project within their fields of competence and for the co-operation necessary

to carry through the vertical part of the project. A co-ordinating committee was set up to secure the necessary control and transfer of information.

Committees, consisting of specialists from all levels of the education system together with experts outside the school world, have been and continue to be set up for each subject. Their reports are intended to serve as a basis for possible changes and improvements. The committees describe and evaluate the subjects as they are taught at all levels of the Danish school system and take into consideration:

- how they are taught;
- how the pupils and students experience the progression;
- the teachers' qualifications;
- what weaknesses and problems have been detected;
- what suggestions can be made for improvements.

The following subjects have been evaluated or are under evaluation: Danish, English, German, French, mathematics, physics, biology, computer science, social studies, art, music, chemistry, history, classical civilisation and physical education.

However, the project also comprises transversal themes, and the following themes have been evaluated or are under evaluation: the use of spoken language, the use of written language, language awareness, examinations, levels of attainment and accreditations, differentiation and vocational guidance.

The evaluation reports are sent to all institutions, educators and other interested parties, and the ministry departments mentioned above are responsible for the further development and carrying out of the recommendations.

2. Financing and budgeting

The gymnasium and the HF courses

General upper secondary education is financed by county-councils and they have different ways of allocating money to schools. Most, however, give the schools a lump sum to cover all expenses except salaries, which are usually paid directly by the county council. Some counties are moving towards a system where schools get a blok grant to cover all expenses including salaries.

Private schools are funded by the government through a system based on the average expenditures of the public schools. On average, private schools

get 80,5% of the expenses per pupil in public schools. The total grant to all private schools is divided into two parts; 12% is distributed equally between the schools, and the rest according to a "taximeter" principle with a specific amount per pupil. The additional expenses of private schools are covered by parents.

Vocational schools

In April 1989, the Folketing passed the present Act on Vocational Schools. This act introduced, *inter alia*, the "taximeter" system. According to the act each school receives an annual grant calculated according to objective criteria, namely, the number of full-time student equivalents and rates for different trade courses offered by schools. The rates are approved by parliament and included in the appropriation act.

A vocational school's total annual grant is calculated in two parts: teaching grants and grants for joint expenditure. It is, however, important to note that these two types of grant are given as one block grant, and the schools are free to re-allocate the grants between teaching and joint expenses.

The calculation of teaching grants is based upon the number of full-time student equivalents in the actual year. The workload of a full-time student equivalent corresponds to a forty-week study period, including home work. This means that a full-time student equivalent may correspond to one student studying forty weeks during one year or twenty students studying two weeks each during one year.

A teaching rate is calculated after having taken into account the following four elements:

- teachers' salaries;
- assisting teaching staffs' salaries (for example, workshop assistants);
- provision of teaching aids/textbooks, material used in special trades, etc;
- equipment.

Trade courses have been divided into groups according to estimates of their twinning costs. This means that courses in the same group will receive the same grant per full-time student equivalent. It has been considered important to minimise the number of groups in order to avoid special grants for each trade course. The schools will therefore have to take into consideration the advantages and possible drawbacks of running various courses.

As mentioned above, the grants are based on the number of full-time students in the actual year and the grants that the schools receive are adjusted on a continuous basis in accordance with the number of students. This re-adjustment takes place four times a year.

The rate for joint costs covers the following expenses:

- general management and administration of the school;
- maintenance and the operation of buildings;
- mortgage interest and rent of hired buildings.

The rates for joint costs take into account the following elements:

- a basic grant, which is independent of the size of the school (that is, the number of students);
- a grant based on the number of full-time student equivalents;
- the actual size of mortgage interest, rent of hired buildings and taxes.

The grant per student is calculated according to the number of full-time student equivalents in the previous year. The calculation is thus made once a year at the beginning of the fiscal year.

Building investments and the hire of buildings have to be approved by the ministry. At present, the ministry is investigating the possibility of introducing a capital "taximeter" system with fixed rates for building maintenance, mortgage interest and rent costs. The aim is to decentralise decisions on building investments.

Furthermore, a number of pooled grants have been established. The schools are free to apply for such grants. As an example, grants for the development of new study courses can be mentioned. It is, furthermore, possible to apply for loans or grants for schools in especially difficult financial situations.

All public education is free of charge, but the school can require that pupils buy pocket calculators and dictionaries.

Expenditure

Total public expenditure on education in 1991 amounted to 58,4 thousand million kroner, more or less equally distributed between the state, on the one hand, and local authorities, on the other. It constitutes 12% of the total public expenditure and 7,4% of the gross domestic product, or 11 200 kroner per inhabitant. Public expenditure as a percentage of the gross domestic product has developed as follows over the past few years:

1989	1990	1991	1992	1993
7,5%	7,5%	7,4%	7,4%	8,0%

These figures cannot be compared with OECD published figures, as OECD has used other (and variable) definitions of "education". The definition used in this paper covers primary, secondary, higher, further and adult education, including administration of the educational system and the student support scheme.

The amount distributed to the different educational levels was as follows:

Basic school education	25,8 thousand million kroner	45%
Youth education	11,8 thousand million kroner	20%
Higher education	10,7 thousand million kroner	18%
Adult education	8,4 thousand million kroner	14%
Administration, etc.	1,7 thousand million kroner	3%

As regards youth education expenditure, 3,2 thousand million kroner was used for general upper secondary education, 5,2 thousand million kroner for vocational oriented youth education, and 1,5 thousand million kroner for the state education grant and loan scheme.

Below are details of the pupil/teacher ratios to be found in the different sectors of education

Basic school:	
The *Folkeskole*	10,3
Private schools	11,2
Youth education (general and vocational):	
General upper secondary schools	9,2
Commercial schools	12,4
Technical schools	8,9
Higher education	13,6

3. School and society

Traditionally, commercial and technical schools have strong relations with trade and industry; their representatives being members of school boards. Furthermore, the employers' union and trade unions form a majority in the advisory councils for vocational upper secondary education.

Relations between general upper secondary schools and trades and industries are traditionally not very developed, but since the introduction of school boards in 1991 relations have been strengthened in many schools.

Generally, schools have, through the last decade, opened up towards society; many schools are engaged in collaboration with local organisations.

In recent years, the teaching of contemporary issues has been introduced as a responsibility of schools, mostly primary schools, but to a certain degree also the upper secondary schools. This involves topics such as Aids and HIV, environmental issues and health education.

In commercial and technical schools and on HF courses, parents play literally no role, but in the general upper secondary schools, parents are members of the board and meetings between parents and teachers are held at least once a year.

4. Administration and organisation of the educational system and schools

The pedagogical structure

The gymnasium

The course of instruction at the upper secondary school lasts three years and is given in two different branches, the languages branch and the mathematics branch. Instruction comprises obligatory subjects, common to all students in the branch chosen, and optional subjects. Optional subjects are on two levels, higher level and intermediate level. Higher level subjects are normally based on either common subjects or intermediate level subjects. Students decide which subjects they will follow and on which level (see below).

Obligatory subjects in both branches are biology, classical studies, religious education, Danish, English, geography, history, music, visual arts, and physical education and sports. In the languages branch, instruction also includes German or French at continuation level, German, French, Italian, Japanese, Spanish or Russian at beginners level as well as Latin and the natural sciences (mathematics, physics and chemistry). In the mathematics branch, instruction also includes chemistry, mathematics and physics as well as French or German at continuation level or German, French, Spanish, Italian, or Russian at beginners level.

The higher level optional subjects are English and German at continuation level and beginners level Spanish, Italian, Japanese, Russian, Latin, Greek, social studies, biology, chemistry, physics, mathematics and music. Latin and

Greek may only be chosen by students in the languages branch. Physics and chemistry may only be chosen by students in the mathematics branch. English is organised differently in the two branches.

The intermediate level optional subjects are biology, business, economics, chemistry, computer science, design, drama, film and TV studies, geography, Latin, mathematics, music, philosophy, psychology, physical education and sport, physics, social studies, technical studies and visual arts. Mathematics and physics may only be chosen by students in the languages branch. Chemistry and Latin are organised differently in the two branches.

Instruction also includes a major written assignment in the third form in Danish, history, or one of the student's optional subjects at the higher level. All students also receive instruction in electronic data processing.

For the single student, instruction comprises the obligatory subjects, and optional subjects: four or five weekly lessons in the second form and fourteen or fifteen weekly lessons in the third form. The major written assignment is in addition to this. A subject may only be chosen at one level and the same subject at intermediate level can not be chosen in both the second and third form.

Students in the languages branch must choose at least one language at the higher level, and students in the mathematics branch must choose one subject from mathematics, physics, chemistry, biology, music and social studies at the higher level.

Students in the languages branch who choose both Latin and Greek as optional subjects at the higher level complete instruction in their continuation language or beginners language after the first form. Students who choose Greek at the higher level do not participate in instruction in classical studies in the third form.

Students in the mathematics branch who choose either social studies or music at the higher level choose at least one of the following subjects: mathematics at the higher level, physics at the higher level, biology at the intermediate level, geography at the intermediate level or chemistry at the intermediate level.

The choice of French, Italian, Japanese, Russian, Spanish or German as optional subjects presupposes that the student has received instruction in the language(s) concerned in the first and second forms of the upper secondary school.

Students have a duty to attend instruction, including a duty to hand in written assignments as required and to participate in the end-of-year examination after the first and second forms.

If a student's absences or failures to hand in written assignments exceed a limit set by the principal, normally 15% of the lessons held or the written assignments required, the student is generally required to take an examination in all the subjects they have been taught.

Courses

The upper secondary school leaving examination can be taken as a full examination following a two-year course. An examination can also be taken after single-subject courses. Examinations in single subjects can be pieced together to form a complete upper secondary school leaving examination.

The examination provided for above can also be taken by independent students who present themselves for examination following no, or only partial, previous instruction in the subject(s) concerned.

As in the upper secondary school, the complete upper secondary school leaving examination can be taken in one of two branches: the languages branch and the mathematics branch. It must include obligatory subjects, common to all students in the chosen branch, and optional subjects, which may be chosen by students of both branches. Optional subjects are offered at two levels: higher and intermediate.

- *Higher preparatory examination courses (HF)*

Within a county's boundaries, the county council provides sufficient capacity for the two-year higher preparatory course so as to allow all applicants who satisfy the admission requirements to be admitted. In ensuring the availability of adequate capacity, the county council may take into account the places provided by private and state educational institutions, namely, private upper secondary schools and state and private teacher training colleges. The county council ensures that qualified applicants to the single-subject courses, which prepare students for further studies, can be admitted to the desired course within the county boundaries and within a reasonable time and geographic distance.

The obligatory subjects taken as part of a higher preparatory examination are Danish, English, French or German, history, mathematics, religious studies, social studies, physical education and sports, music or visual arts and two of the following: biology, science and geography.

Each student must choose three optional subjects from the following: biology, business economics, chemistry, classical studies, computer science, design, drama, English, film and TV studies, French, geography, German, Italian, mathematics, music, philosophy, psychology, physical education and sport, physics, Russian, social studies, Spanish, technical studies and visual arts.

The range of subjects offered on independent county council courses is set by the board of governors on the recommendation of the principal. The range of subjects offered at adult education centres (VUC) is set by the principal. At other county council educational institutions offering instruction, the range of subjects offered is determined by the authority that otherwise sets the range of subjects offered by the institution.

The range of subjects offered at state institutions is set by the authority that otherwise sets the range of subjects offered by the institution.

The higher preparatory examination can be taken as a complete examination after a two-year course comprising the following common core subjects three optional subjects and a major written assignment. It can also be taken after single-subject instruction. Examinations in the single subjects can be pieced together into a complete higher preparatory examination.

The examination mentioned above can be taken by independent students who present themselves for examination following no, or only partial, previous course instruction in the subject(s) concerned.

The range of subjects offered at independent private courses and other private educational institutions offering instruction under the terms of this executive order is set by the board of governors on the recommendation of the principal.

An amalgamation of educational institutions that basically offer a two-year course with educational institutions that basically offer single-subject courses (VUC) can, in exceptional circumstances, take place in sparsely populated areas, or where other local factors call for it. In such cases, attention is paid, in planning the teaching, to the varying backgrounds of the students involved.

- *The higher commercial examination (HHX) and the higher technical examination (HTX) courses*

The present courses leading to the higher commercial examination (HHX) and the higher technical examination (HTX) build on an act from 1990. This act made it possible for qualified students to go directly from the basic school to a three-year (HHX) or a two-and-a-half to three-year (HTX) course, of

which the last two years are spent on the actual upper secondary course. At the same time, a division of all subjects into levels created a greater comparability with the general upper secondary school. Furthermore, the academic aim was strengthened.

The HTX course consists of a vocational education part of six months to one-year's duration followed by a two-year vocational upper secondary education part. The course aims at further studies particularly of a technical nature and consists of technological subjects including workshop instruction, natural sciences subjects, language subjects including Danish, and social science subjects. The central subjects of the course have a level that corresponds to that of the intermediate level of the gymnasium. Among the optional subjects of the course, which comprise approximately one-third of study time, the students choose at least two subjects at the highest upper secondary level. In the second year of the HTX course, the course is divided into a building technology, a mechanical, an electrical and a process-technical branch. The course is organised with a relatively heavy emphasis on technical topics, which are often used as a point of departure for the theory in, for instance, the natural science subjects. Upon completion of a practical training period in a firm, young people with an HTX examination meet both the theoretical and general, as well as the vocational requirements for entry to the advanced technician's courses and the engineering colleges. As for the HHX, the HTX entitles students to admission to the other higher education institutions.

- *Vocational training and education*

The basic vocational education and training courses in Denmark provide young people with vocational training as well as broad general qualifications. According to the Act on Vocational Education and Training, the education system should:

- motivate young persons towards education and ensure that all young people who want to get a vocational qualification have genuine possibilities of choosing between several different streams;

- provide young people with a basis for future employment and at the same time contribute to personal development and the understanding of society and its development;

- meet the needs of the labour-market for vocational and general qualifications assessed with a view to the development of business and production, and society, including developments in the structure of the business sector, in labour-market conditions, in workplace organisation and in technology;

– provide young people with a solid basis for further education and training.

Admission rules

The gymnasium

Applicants must have completed nine or ten years of basic education, including English from the fifth form and a second foreign language from the seventh form (German or French). The school of origin must declare the applicant qualified for the gymnasium, and applicants must have taken the *Folkeskole* leaving examination with satisfactory results in Danish and mathematics and, for applicants to the languages branch, in English, German or French, or, for applicants to the mathematics branch, in science.

Courses

Applicants must have completed ten years of basic education, including English from the fifth form, and a second foreign language from the seventh form (German or French). For applicants coming directly from the *Folkeskole*, the school of origin must declare the applicant qualified for upper secondary education, and applicants must have taken the *Folkeskole* advanced leaving examination with satisfactory results. For other applicants, the headmaster of the course decides whether the applicant is qualified or not.

Higher preparatory examination courses

Applicants must have finished lower secondary education at least one year before admission to the course and must be accepted by the HF institution as qualified. Applicants wishing to be admitted directly from lower secondary school to a two-year course must have completed ten years of primary and lower secondary education and must be considered qualified by their schools of origin.

Higher commercial examination and the higher technical examination courses

There are two ways of entering a vocational upper secondary course: either directly after the *Folkeskole* or on completion of one year of a vocational education and training course at a commercial school (HHX) or six months to one year at a technical school. In order to be admitted, a student must be considered qualified by the vocational school, and as far as the HHX is concerned the student must also meet a number of specific requirements, in particular with regard to foreign language skills.

In both cases, the vocational education and training year is shared by the students who want a vocational education and training qualification and the students who want a vocational upper secondary qualification.

At the end of the basic six months to one year, the vocational school assesses whether the student is qualified to continue to the vocational upper secondary programme. The assessment of the school takes into account the student's maturity, independence and the results obtained in the basic course.

For the HHX course, students are required to have a good knowledge of English and a second foreign language or mathematics.

The HTX course is, in particular, based on knowledge in Danish, mathematics, physics (science) and foreign languages. To this should be added experience from a workshop-related subject.

Vocational education and training

Admission to a vocational training course is open to persons who have completed compulsory education (normally nine years). Admission is not granted on the basis of certificates.

There are two routes into vocational training, that is the "school route" and the "practical training route". The two access routes meet at the beginning of the second school period. Irrespective of the access route, the duration and content of the training are the same.

Students choosing the "school route" normally enter the first school period, which lasts twenty weeks. Here, the students try out several different trade areas and receive parallel individual and collective vocational and educational guidance. Workshop training has a central role and is supplemented by more theoretical subjects. One-third of teaching hours consist of optional subjects. After the first school period, students choose their specific stream and continue with the second school period (also twenty weeks). After the second school period, students must enter into a training agreement with a firm in order to continue their programme. Students receive a salary from the day they begin the practical training.

In just under one-third of the vocational trades, however, the first school period is optional. In these cases, students may start directly on the second school period.

Students who choose the "practical training route" receive a salary throughout their education and their first school-based training is the second school period.

The admission figures for 1991 show that about 75% of students admitted to the technical schools have chosen the "school route".

Students over 18 years of age may start directly on the second school period. Adults with a relevant employment and training background are given credit for their qualifications.

The basic structure of the training schemes is based on the alternance ("sandwich" course) training principle. The programmes are generally no longer than four years. Normally, the duration of schooling cannot exceed eighty weeks, including the first school period. The more detailed structure – alternation between school and practical training – is laid down by the trade committees. The duration of the total school attendance as part of a programme is, however, decided by the Ministry of Education.

The upper secondary education credit transfer system

In connection with the implementation of new legislation on the gymnasium and HF, the Minister of Education issued an executive order on credit transfer between the different types of upper secondary education, including Greenland upper secondary education.

The main rule is that a student is exempt from instruction and examination in a subject in which they have already passed the examination with a mark of six or more at the same or a higher level (see definition below) in one of the other types of upper secondary education. The mark previously obtained is transferred to the new examination certificate.

In addition, the headmaster may exempt a student from instruction and examination in a subject in which they have passed an examination at the same or a higher level in other than upper secondary education. In this case, however, the mark is not transferred to the new certificate.

All relevant subjects taught in the different types of upper secondary education have been divided into three levels: A (higher level), B (intermediate level) and C (lower level).

Each subject has been placed at the different levels according to a concrete assessment based upon the following elements: the total number of lessons; the requirements as regards the student's foundation in the subject; the immersion in the subject; whether a written examination is held; and the qualifications required to teach the subject. This means that a subject taught at two types of upper secondary education can be placed at the same level, although the exact professional content of the subject may vary. As an example it could be mentioned that a student who has passed the higher com-

mercial examination with French as a continuation subject at B level will have their mark transferred to a higher preparatory examination certificate as equivalent to French as an optional HF subject.

5. The school as an organisation and as a community

School and course boards

School and course boards consist of:

– representatives of the county council and the municipal councils of the catchment area;

– parent representatives (at schools only);

– staff and student representatives (who cannot form the majority of the board).

Other interested parties, for instance local business, may be represented on the board if there is a special need for it. The headmaster takes part in the board meetings without the right to vote.

The board fixes:

– apart from the salaries and on the recommendation of the headmaster, the distribution of the budget fixed by the county council to the different schools and courses;

– the maximum number of students per class;

– on the recommendation of the headmaster, the number of optional subjects;

– the holidays of the schools and courses;

– the rules of order of the schools and courses.

In addition, the board contributes to co-operation between the school/course, the homes of the students and the local community, and takes part in the solution of the social concerns of the school/course. The county council can delegate some of its competence to the boards.

The headmaster

The headmaster is the pedagogical and administrative leader of the school and the local representative of the central pedagogical authority – namely the Ministry of Education – responsible for teaching and examinations and the

issue of examination certificates. Under the pedagogical responsibility of the headmaster come matters concerning the teaching and personal conditions of the teachers.

As pedagogical leader the headmaster decides on the following matters:

- the annual allocation of subjects and lessons among the teachers;
- the allocation of other tasks among the staff;
- optional subjects to be taught;
- the admission of students;
- all individual matters concerning students, including the expulsion of students.

Complaints against the headmaster's pedagogical decisions are brought before the Minister of Education. As administrative leader, the headmaster is responsible to the county council for the running of the school/course and to the board for matters coming within the competence of the board. Furthermore, the headmaster is responsible for the running and maintenance of school buildings. Finally, the headmaster makes the decision on all matters where other authorities are not competent.

The pedagogical council

The pedagogical council consists of the headmaster and all the teachers of the school/course. The council elects its chairman and fixes its own rules of procedure. The rules of procedure are not included in the statutes of the school/course and do not have to be approved by the board or the county council.

The pedagogical council is the headmaster's advisory body. The headmaster thus decides when the council should be consulted. Typical items for consultation are the subjects to be offered by the school/course, the allocation of subjects and lessons, excursion guidelines, experiments, theme days and study circles.

The student council

The student council fixes its own statutes, which do not have to be approved by the board or the county council. The council submits statements to the headmaster, who may discuss the subjects to be offered in the school/course, the allocation of subjects and lessons, excursion guidelines, experiments,

themedays and study circles with the council. The relation between teaching and the workload of the students may also be discussed. The council cannot, however, comment on individual teachers' conditions.

Vocational schools

Approximately the same structure as described above is present at vocational schools, apart from the fact that the board has decision-making power in fields where the county council decides at the gymnasium and HF courses.

6. The curriculum

The gymnasium

The school year consists of 199 days including the examination period, and instruction is organised on the basis of the following number of lessons per week:

Language branch	1st form	2nd form	3rd form
Religion	-	-	3
Classical studies	-	-	3
Danish	3	3	4
English	4	4	-
German or French	4	4	-
Beginners/continuation language	4	4	-
Latin	3	-	-
History	3	3	3
Geography	-	3	-
Biology	3	-	-
Natural science	3	-	-
Music	3	-	-
Visual arts	-	-	2
Physical education & sports	2	2	2
Optional subjects	-	4-5	14-15
Total	32	31-32	31-32

Mathematics branch	1st form	2nd form	3rd form
Religion	-	-	3
Classical studies	-	-	3
Danish	3	3	4
English	3	4	-
Beginners/continuation language	4	4	-
History	3	3	3
Geography	-	3	-
Biology	3	-	-
Physics	3	3	-
Chemistry	3	-	-
Mathematics	5	5	-
Music	-	-	2
Visual arts	-	-	2
Physical education & sports	2	2	2
Optional subjects	-	4-5	14-15
Total	32	31-32	31-32

Instruction in optional subjects at the higher level is organised on the basis of the following number of lessons per week: Latin, social studies, music and biology are taught in five lessons per week in the second and third forms, Greek in five lessons per week in the second form and eight lessons per week in the third form, chemistry in four lessons per week in the second form and five lessons per week in the third form. English, German (continuation or beginner), French (continuation or beginner), Spanish, Italian, Japanese, Russian, mathematics and physics are taught in five lessons per week in the third form.

Instruction in optional subjects at intermediate level is given for one year with four lessons weekly. In geography as well as in mathematics, physics and chemistry in the languages branch, instruction is given in the third form. Instruction in other subjects is given in either the second or third form. Classes may consist of students from both forms.

At the beginning of instruction, the teacher either prepares a plan for the autumn term's teaching in collaboration with the students or informs the students of such a plan. In the later phases of instruction, the teacher and the students plan the work together. The teacher and the students regularly discuss the instruction given.

Instruction in the individual class is co-ordinated with a view to achieving a cohesion between the various subjects and a suitable distribution of the students' workload. This co-ordination is discussed at the teachers' assembly.

The teachers' assembly includes all the teachers concerned, under the chairmanship of the principal. Teachers have a duty to attend meetings of the teachers' assembly.

In addition to the subjects already mentioned, instruction also includes assembly periods, and voluntary lessons in music, visual arts and sport, as well as excursions, etc. The Ministry of Education lays down further regulations concerning this.

The courses

In the courses, instruction is given in a more concentrated form and the subjects music, visual arts, and physical education and sports are not compulsory. The curriculum is expressed in terms of the total number of lessons and not in weekly lessons.

Higher preparatory examination courses

The common core subjects and optional subjects and the total number of lessons over the two years are the following:

Subject	Compulsory core subjects	Optional subjects at common core level	Optional subjects
Visual arts	70	-	140
Biology	100	100	140
Danish	240	-	-
Computer science	-	-	140
Design	-	-	140
Drama	-	-	140
English	140	-	140
Business economics	-	-	140
Film & TV studies	-	-	140
Philosophy	-	-	140
French (continuation)	140	-	140
French (beginners)	-	-	270
Physics	-	-	140

Subject	Compulsory core subjects	Optional subjects at common core level	Optional subjects
Physics-chemistry	140	140	-
Geography	100	100	140
History	200	-	-
Physical education & sport	70	-	140
Italian	-	-	270
Chemistry	-	-	140
Mathematics	170	-	170
Music	70	-	140
Classical studies	-	-	140
Psychology	-	-	140
Religious education	100	-	-
Russian	-	-	270
Social studies	70	-	140
Spanish	-	-	270
Technical studies	-	-	140
German (continuation)	140	-	140
German (beginners)	-	-	270

A two-year course leading to the higher preparatory examination includes instruction in the required common core subjects and the optional subjects. The teaching year consists of 199 days including the examination period.

The higher commercial examination and the higher technical examination courses

The courses are of two-years' duration. Approximately two-thirds of the course consists of compulsory subjects, approximately one-third of optional subjects. The HHX course has the following subject range:

Subject	Level[1]	Total number of lessons
Danish	A	240
English	B	160
	A	360

Subject	Level[1]	Total number of lessons
2nd foreign language	C	320/160
	B	480/320
	A	680/520
Accountancy and business economics	B	180
Business economics optional	A	340
Marketing	B	140
	A	270
Economics	C	130
Danish and international commercial law	C	110
International trade	B	110
Contemporary history with culture	C	140
Data processing with organisations	C	110
Mathematics	C	160
	B	340
	A	500

1 See the section on the credit transfer system

The compulsory subjects, comprising approximately 1 320 lessons are the following:

Danish	Level A
English	Level B
Acountancy and business economics	Level B
Marketing	Level B
Economics	Level C
Danish and international commercial law	Level C
International trade	Level B
Contemporary history with culture	Level C
Data processing with organisation	Level C

The optional subjects comprise approximately 880 lessons. Schools often have a broad supply of optional subjects, always including mathematics and at least three of the foreign languages: English, German, Spanish and French.

All students must choose one of three possible business economics options. All students continue with one foreign language in the second year of the course. In addition, there are certain requirements with regard to the levels at which mathematics or foreign languages are to be studied.

The HTX course has the following subject range:

Subject	Level	Total number of lessons	Optional subjects	
			Choice of subject	Choice of level
Technology	B	250	420	
	A	420		170
Technical subject	B	320	320	
	A	490	320	170
Mathematics	B	325		
	A	495		170
Physics	B	215		
	A	385		170
Chemistry	C	140		
	B	225		225
	A	395		
Biology	C	120		
Danish	B	220		
English	C	210		
	B	295		85
2nd foreign language	C	130	130	
	B	300	130	170
Social studies	C	75		

The compulsory subjects, which comprise approximately 1 550 lessons, are the following:

Technology	Level B
Mathematics	Level B
Physics	Level B
Chemistry	Level C
Biology	Level C
Danish	Level B
English	Level C
Social studies	Level C

The optional subjects comprise approximately 1 050 lessons, and among these the students must choose one technical subject (line) and a second foreign language (French or German).

Vocational education and training

Schools, colleges, etc., are now self-governing, have the right to decide their own profile and are accordingly free to spend their income – mostly from public grants – as they see fit.

Basically, only the overall targets and framework are laid down centrally. It is up to the individual institution, in co-operation with its local industrial partners, to decide how the targets and framework can be met. The planning of the detailed syllabus is a local matter.

In the preparatory process of the reform, the employers' and employees' organisations have exerted a substantial influence on the planning of the vocational education system as such. The present division into courses and specialisations has basically been decided by the trade committees.

The curricula for these courses contain four different types of subjects:

Basic subjects:	one-third of the teaching hours at school
Area subjects:	one-third of the teaching hours at school
Specialised subjects:	one-sixth of the teaching hours at school
Optional subjects:	one-sixth of the teaching hours at school

The basic subjects comprise basic practical and theoretical instruction providing the students with broad general and vocational qualifications. It is the aim of the basic subjects to meet the requirements set with regard to youth education courses, namely, to enhance the personal development of the students, to qualify them for further studies and to convey to them an understanding of society.

The area subjects comprise practical and theoretical subjects relevant to a broad field of trades and contribute to the provision of general and specific vocational qualifications. The area subjects are normally taken by several streams.

The specialised subjects constitute the highest professional level in the vocational education and training courses. They comprise trade specific practical and theoretical instruction. Students choose a specialisation among the subjects that have been approved for the course in question. The choice of specialisation is normally included in the training agreement and is relevant to the firm in question.

The subject structure in the commercial and clerical streams differs from the normal course under the act, in that basic subjects replace area subjects in the first year, which is the combined first and second school periods. The eight basic subjects are shared by all vocational training courses within the commercial and clerical sector, and they cover five-sixths of the subjects of the first year, in which the optional subjects account for one-sixth.

7. Evaluation and assessment

General upper secondary education

Internal evaluation

The aim of continuous evaluation is to guide the student and teacher with a view to the further planning of instruction. The individual teacher will thus have the possibility of adjusting the student's progress. The level of the evaluation also provides the basis for a detailed guidance of the individual student with regard to their progress in the subject concerned and in studying methods.

The method of evaluation is determined by the students and the teacher together and due regard is paid to the form and content of the instruction. The teacher follows the benefits gained from the instruction by the single student as well as by the whole class. At suitable intervals, this is discussed both collectively and individually with the students. The whole course of instruction is evaluated by means of tests, special assignments/reports or conversations.

External evaluation

Evaluation of the individual student's qualifications in the subject is also made for external purposes. This is done by means of the following forms of evaluation: marks for the year's work, examination marks, term marks and testimonials.

Marks for the year's work, which appear on the student's examination certificate, are given at the end of the school year. Marks for the year's work are given by the teacher of the subject concerned and express the judgement of the latter on the student's level of attainment at the end of the year.

Term marks are given in those subjects in which marks for the year's work are given. Term marks are given twice during the school year and, in the case of subjects that are to be continued in the following year, also at the end of the

school year (marks for the year's work not to appear on the examination certificate). The principal determines the date for the giving of term marks.

These marks may be accompanied by a written testimonial of the student's aptitude for, and work in, the subject concerned. If the mark given is under six (see page 47), on the marking system), it must be accompanied by a testimonial and the same applies if the mark is two points or more lower than that given at the previous evaluation.

The upper secondary school leaving examination – written and oral examinations

A total of ten examinations must be taken in order to pass the complete examination, of which up to three may be taken after the first and the second years.

After the third year, all students take a written examination in Danish and in the subjects chosen at the higher level. The number of oral examinations varies according to the number of subjects chosen at the higher level.

Written examinations are based on national question papers, produced by the ministry's Department for Upper Secondary Education. For each subject, there is an examination committee consisting of hand-picked teachers and the department's consultant(s) for the subject in question. Oral examinations take place in the subjects selected (at random) by the Department of Upper Secondary Education for each individual school.

School administrations are notified of the examination schedule about two months before the end of the spring term. Students in their final year (and their teachers) do not know which subjects have been selected until the last day of ordinary instruction. By the end of April all subject consultants must have accepted the *petita* (lists of texts, etc., offered by individual classes for the oral examination).

Written examination papers are marked by two external examiners, namely the teacher has no say in the mark given, but is allowed two days to ask for individual marks to be reconsidered. The examiners can alter the mark after hearing the teacher's arguments, or decide to stick to their original decision. No exact information is available about how many such informal changes are made every year, but the number is believed to be insignificant. Some examination papers are sent by the teacher or the student to the ministry with a formal complaint. In such cases the subject advisers act as arbiters.

For each subject, there is a permanent group of external examiners made up of teachers – with 5% of members from other sectors of the education system or from industry. Large subjects (Danish, mathematics and English) have between 200 and 250 examiners. Small subjects may have as few as 10 or 25 examiners.

In oral examinations, the teacher and one external examiner decide together the mark. In case of disagreement between two neighbouring figures on the marking scale, the external examiner has the last word. The work of oral examiners is part of their ordinary contract as teachers. Until recently, all teachers could, in principle, be called upon to act as oral examiners, but from 1993 examiners will be personally appointed, that is certain teachers (identified by the subject advisers) will not be appointed and will instead have to undertake other work at their schools during the examination period.

Students are given a mark (on a scale from zero to thirteen) for the year's work as well as for their achievement in the examinations. The average of the two sets of marks is then the pupil's "examination result", which determines the possibilities for higher education. In order to pass, the student must have an average of at least six.

Admission to higher education is granted on the condition that the student has passed a full examination and has obtained a certain average, which will have to be as high as ten or more in order to give them access to such exclusive fields as anthropology, art history and midwifery. Institutions of higher education are currently changing their admission regulations so that more emphasis will be placed on real qualifications, relevant subjects at higher level, etc., and less on the student's examination average as such.

Non-enrolled students will be examined in all subjects.

The higher preparatory examination courses

HF examinations are administered in the same way as the *Studentereksamen*. With the new credit transfer system, certain levels are now marked together with the equivalent *Studentereksamen* subject by the same group of external examiners.

An important difference to the gymnasium is that a complete HF examination requires an oral and/or written examination in every subject studied.

Like the *Studentereksamen*, the HF examination gives admission to further and higher education, although specific optional subjects or a specific level of attainment are normally required.

The key to the understanding of the difference between the two courses is found in recruitment rather than in the formal, objective variations in duration, degree of modulisation, subject content, etc. The HF population reflects the social stratification of society at large, whereas in the gymnasium the middle class tends to be overrepresented, although less pronounced now than it was fifteen or twenty years ago.

The higher commercial examination and the higher technical examination courses

The examinations that form part of the final examination are taken according to the plan listed below. The abbreviations used are:

W: written examination;

O: oral examination;

P: project.

The HHX

Subject	Examination
Danish	O+W
English	O+W
Other foreign languages	O+W
Accountancy and business economics	W
Business economics (optional)	W
Marketing	W
Economics	O
Commercial law	O
International trade	O
Contemporary history with culture	O
Data processing with organisation	O
Mathematics	O+W (level C only W)
Other options	O

Each year the ministry decides which examinations are to be held. Each student normally takes a minimum of ten and a maximum of twelve examinations.

Subject	Level	On completion of 1st year	On completion of 2nd year	According to choice of school
Technology	B	P+O		
	A		P+O	
Technical subject	B		P+O	
	A		P+O	
Mathematics	B		W+O	
	A		W+O	
Physics	B	O		
	A		W+O	
Chemistry	C	O		
	B			O
	A		W+O	
Biology	C		O	
Danish	A		W+O	
English	C		O	
	B		W+O	
2nd foreign language continuation	C	O		
beginners	C			O
	B		W+O	
Social studies	C		O	

Vocational education and training

The targets and general framework of the individual training courses are specified in administrative orders. These are drawn up by the Ministry of Education based on input from the central trade committees. The administrative orders specify the basic subjects, area subjects and special subjects of the training course, and include the targets that the students should attain in the various subjects as well as provisions on how the assessment should be made.

Syllabuses containing the actual description of the content of the instruction are drawn up locally. The overall targets and general framework should be met, so as to ensure the general uniformity of training and qualifications acquired. The specific content of instruction as well as the methods of instruction, however, may vary from school to school. Students do not necessarily find the same subject names in the timetable, because subjects are often combined.

The element of assessment has been strengthened in courses. The performance of students is subject to continuous assessment. This assessment may take the form of examinations or it may be the teacher's assessment of the student's work effort at school. The students complete their education by passing a final examination or trade test. The examination form varies from course to course, and it may take the form of a journeyman's test, a school examination or a combination of the two.

Marking scale

Where assessment of pupils and students is expressed with marks the following marking scale is used: 13-11-10-9-8-7-6-5-3-0.

Concerning the use of the individual marks the following apply:

Group	Mark	Corresponding to
Excellent	13	Exceptionally independent and excellent performance
	11	Independent and excellent performance
	10	Excellent but not particulary independent performance
Average	9	Good performance, a little above average
	8	Average performance
	7	Mediocre performance, slightly below average
Pass Hesitant	6	Somewhat hesitant but more or less satisfactory performance
	5	Hesitant and not satisfactory performance
	3	Very hesitant, very insufficient and unsatisfactory performance
	0	Completely unacceptable performance

As is to be seen from the definitions of the various marks, the scale is divided into three main groups, marked respectively by the words "excellent", "average" and "hesitant".

Allocation of marks

The assessment of a level of proficiency and performance is done on the basis of the requirements stated in the executive orders on the various subjects. Proficiency or performance is assessed both from the point of view of the aims set for the subject concerned and the content of the instruction as described in the executive order on the subject. No particular distribution of marks is aimed at.

In every assessment, the level of proficiency or performance is first placed in one of the three marking scale groups and the decision is then taken on which mark within the group the level of proficiency or performance is allotted.

Evaluation of institutions

Institutions are invited to participate in the quality development project. When a number of institutions have accepted the invitation, two at a time are selected and asked to prepare for the visit of the evaluation team by supplying the team with extensive material describing the two institutions in detail. They are also asked to undergo a first self-evaluation by inviting the users of the institution to fill in questionnaires.

A working plan is drawn up in co-operation with the evaluation team, and about six months after the beginning of the preparations the visit takes place. The evaluation team spends four days at the school and examines the following issues:

The teaching: (attending as many lessons as possible, they observe):

- the teachers' performance (plan, handling, personality);
- the teaching methods and their relevance;
- the performance and active participation of the students (note: there is a strong oral tradition in Danish teaching);
- the content and its correspondence with the curriculum.

The management and its:

- strategies;
- planning;
- administrative methods;
- delegating ability;

- ability to develop and initiate;
- support to staff and students;
- co-operation ability.

The administration and its:

- effectiveness;
- service to students, teachers and other interested parties;
- communication and ways of information;
- ability to co-operate.

The students and their:

- active participation in the life of the school;
- attitude towards the school (interviews);
- future plans.

Ways of co-operation:

- school board;
- staff council;
- committee work (participation);
- subject committees;
- co-operation between colleagues (support/supervision);
- extracurricular activities.
- interplay between the school and its partners; the role of the school in the local community;
- buildings and equipment.

All these elements of the school are analysed, evaluated and described in a report. The report contains descriptions, emphasises the school's strengths and weaknesses, and gives advice on ways of improving and changing. The school has the opportunity to comment on a draft of the report. It is then printed and sent out to all upper secondary institutions for inspiration. On the basis of the report, the school works out an action programme. After a year the evaluation team returns to the school for a one-day visit, to ascertain the amount of change and improvement.

Self-evaluation

For some years the ministry has been working together with fourteen schools on a project of self-evaluation. The result of this has been published in a pamphlet about different methods of carrying out a self-evaluation project. This

pamphlet has also been distributed to all upper secondary institutions for inspiration.

8. School staff

The headmasters of gymnasia, courses and HF courses are appointed by the county councils after the ministry has offered its opinion on the qualifications of the applicants. At commercial and technical schools the headmaster is appointed by the board.

Teachers at upper secondary schools and courses all have a masters degree – normally in a major and a minor subject. Before permanent engagement can be obtained, the student teacher must undertake a course in order to obtain the diploma in education. The course is normally taken during the first of the two years when they are engaged on probation. The theoretical part is given in classes established at regional level and is completed with a written examination. The practical part takes place at a school or a course under the guidance of an experienced teacher in each of the student teacher's subjects and comprises at least 120 lessons. At the end of the practical part the guiding teacher, the courses leader in education and the subject consultant of the ministry examine the student teacher in at least two lessons. After that a written statement on the teaching abilities of the student teacher is issued.

The upper secondary schools – and courses – are regularly visited by subject consultants from the Ministry of Education who attend lessons in their subject and give the teachers advice if necessary. If a headmaster gets the impression that the quality of the teacher's work is lagging behind they should call upon the subject consultant(s) who will attend a number of the teacher's lessons and advise the teacher on how to improve. After a couple of months the consultant will return to see whether the situation has improved. If not, the teacher may be dismissed.

External examiners take part in the written and oral examinations of the upper secondary schools and courses. If the achievements of the students in general are not satisfactory, the external examiner will report to the headmaster and to the Department for Upper Secondary Education and action may be taken against the teacher.

The control that has existed so far in most areas other than the university area has been based on a very traditional conception, assuming that education takes place when a teacher teaches a certain subject to pupils in a class of a certain size for one lesson at a time. This way of thinking has meant that the many different tasks of teachers had to be converted into timetable lessons, which in turn were set off the against the number of compulsory timetable lessons. Changes in working hours and tasks of any kind have thus constantly

manifested themselves in new supplementary circular letters and agreements, and the system has become less and less transparent.

In addition, the time spent directly on teaching activities has tended to be more and more superseded, and it now constitutes a too insignificant part of the total number of working hours. There is instead a need to consider the educational institutions as ordinary work places where the staff work within an agreed framework of working hours. And exactly as in any other undertaking it must be the responsibility of the local school management to divide the working hours between the different tasks.

The management of the individual institution has the freedom to organise and decide on the distribution of the teachers' tasks during working hours. The staff of course – like in other undertakings – have the possibility of exerting a contributory influence on the organisation of the work. But it is not laid down in advance in detailed national agreements.

The salary of a headmaster is approximately 400 000 kroner per year, that of a teacher varies, depending on the seniority of the teacher, from 200 000 to 300 000.

9. The European dimension

In a small country with a very high level of foreign trade, a geographical position as a European crossroads and a population of five million speaking its own national language, the surrounding world and the teaching of foreign languages have to play an important role in the curricula of the component parts of the educational system. A European Union survey[1] made for its Human Resources Task Force in 1991 has shown that 95% of Danish youth under 25 have conversational ability in English, while 67% have the same ability in German.

In the gymnasium – but to a lesser degree on the HF courses – there was a tradition of going on study tours abroad long before internationalisation of education was on the agenda. These study tours normally go to one of the countries whose language the pupils are learning, but other subjects like Danish, classical civilisation, history, geography and physics also use study tours abroad as a part of education.

Dealing with international relations has been, in both earlier and present executive subject orders for the gymnasium and HF courses, an essential objective in nearly all subjects. In foreign language education, reference must

1 "Young Europeans". Report carried out on behalf of Task Force for Human Resources, Education, Training and Youth by INRA (Europe), European Co-ordination Office SA/NV. May 1991

be made to the cultural and social conditions of the country in question in addition to the development of language proficiency.

In history and geography, working with historical and geographical topics in other countries is an essential part of the course, and in Danish part of the literature studied must be translated world literature.

A questionnaire-based survey has shown a high level of activities: every second class goes on a study tour during its three years of upper secondary education, approximately 8% of teachers are re-trained abroad every year and one-third of headmasters get inspiration from study tours abroad. The survey also showed that all schools wanted to give the international aspect a higher priority, and 80% of schools were of the opinion that the profit of international educational activities was high.

In the school year 1991/92, forty-two international classes were established in the upper secondary schools. The objectives of these classes can be grouped under five headings:

The national

An increased awareness of Danish and Nordic identities, own cultural values and social features, own roots – and passing Danish values on to others.

The international

An understanding of other cultures' and language-regions' special characteristics – developing tolerance, learning from foreign values, experiencing cultural differences as something valuable.

The subject related

A knowledge of Europe's past and present (and feeling part of its future) – geographically, historically, ideologically, politically, culturally and educationally.

The political

Knowledge of social relations and decision processes in the international context in which Denmark is placed.

The working method

Preparation for education and employment in an international environment – a career in internationally oriented Danish enterprises, foreign companies, international organisations, etc.

It appears that the schools working with international education have many different objectives. It is important that the purpose of this activity is formulated clearly; schools should not uncritically board the international band wagon because it is fashionable. At a future revision of orders and guidelines for specific subjects, internationalisation should be considered in all subjects and concrete examples of ways and means in which internationalisation can be incorporated in the teaching should be given.

As for all other types of education, schools must formulate quality demands in international education:

- objectives must be described clearly and intelligibly;
- progress and content must be planned;
- the work must be evaluated continuously with a view to adjustment;
- at the end of a course or a project it should be evaluated both by the teachers and the students;
- the level of content and subject should correspond to the level on which the students should normally be;
- students participating in international activities should be thoroughly informed;
- international activities should form a relevant part of the education as a whole;
- experience of international activities should be passed on to the rest of the school by teachers and students;
- the financing of the student study tours must be planned so as to secure a fair chance for all students to participate in international activities.

After the coming into force of the Act on Vocational Education in 1991 the international aspect became much more important in commercial schools.

Two foreign language subjects are now compulsory subjects in all upper secondary education (but not in vocational education). Beyond learning the languages, students also have to learn about the culture of the particular country in the broad sense of the term.

The description of the other subjects is now marked by international aspects to a higher degree than before. In approximately two-thirds of the basic subjects the international element forms an important part of the subject descriptions.

In the revision of the higher commercial examination course (HHX) in 1991 the international element was also strengthened. Two foreign languages are compulsory and during the second year, students have to write a longer dissertion based upon one of the subjects with an international element.

The new short-cycle higher education course in market economists is international in its approach and intended to come up to the best European courses at the same level. Each student has to do a five-week project study abroad.

The new Act on Vocational Education presupposes that the technical schools teach the most internationally relevant production and manufacturing methods and give the students a relatively broad basic knowledge and routine to be used also at further education abroad. Thus, two-thirds of the trade programmes include foreign languages as compulsory subjects.

According to a law passed in 1992 it is now possible for students to spend some or all of their traineeships at enterprises in EU and EFTA countries, which gives vocational education a new international element.

International activities vary greatly from school to school. Some vocational schools have formulated an international strategy, while others – mostly smaller schools – have not been able to find the necessary resources to establish, maintain and develop international contacts.

A special aspect of international co-operation is the export of know-how, and vocational schools have been involved in co-operation with Poland, Hungary, Estonia, Latvia and Lithuania, where vocational education is faced with the need for extensive changes.

III. The efficiency and performance of secondary education

These issues have partly been covered in section II, but some additional information will be given here.

1. A year group's way through the educational system

In the following table are indicated percentages of a year group going in and out of the different educational stages (1989/90). The sum of inflow and the sum of outflow for each stage may differ somewhat. Student flows of less than 1% have not been included, neither has the inflow of students who have been outside the formal educational system for more than fifteen years.

From \ To	Vocational education	Vocational upper education	General upper education	Higher education, short cycle	Higher education, medium cycle	Higher education, long cycle	Labour-market
Basicschool	59	-	33	-	-	-	7
Vocational education		15	4	4	4	-	46
Vocational upper education	8		-	1	6	-	3
General upper education	7	3		2	15	6	4
Higher education							
short cycle					1	-	7
medium cycle						7	20
long cycle							13

The distribution at the 1990 intake in higher education was:

Studentereksamen	20 357
HF	5 285
HHX	2 114
Other	4 528

The unemployment rate according to the level of education (1991):

Basic school education	12%
Basic vocational education	13%
General upper secondary education	8%
Vocational education	9%
Higher education, short cycle	7%
Higher education, medium cycle	5%
Higher education, long cycle	5%

IV. Challenges, problems and prospects

Like most other countries, Denmark will be faced with a number of educational challenges in the coming years. New technologies and new patterns of production, commerce, transfer of know-how and communication, the increased competition inside the internal market of the EU and EFTA countries and the growing internationalisation as a whole calls for the continual adaptation and renewal of educational programmes and the introduction of new ones.

This is not only the case as far as vocational education, training and professional studies for young people are concerned. It is also necessary to give adults opportunities to upgrade old qualifications and to acquire new qualifications and skills in order to strengthen their position on the labour-market.

These needs have been made even more urgent by the high rate of unemployment, 11%-12%, as those with the least education are most severely hit by unemployment. And in this group those young people who have nothing but basic education and who are never in contact with the labour-market are at the greatest risk.

The drop-out problem

The drop-out rate in the education system is therefore a matter of great concern. On the face of it, it seems satisfactory that only 7% drop out after the end of compulsory education, especially when one takes into consideration that two out of the seven per cent are mentally and physically handicapped, who have been integrated in the ordinary school system. The other 5% – mostly socially handicapped pupils – should, however, be able to go through some sort of vocational education, if they get the right support.

It is unsatisfactory that 20% of the 93%, who have continued their education in a vocational or an upper secondary education programme, drop out without transferring to another programme. The drop-out rates are highest in the technical schools' programmes – the number is twice that in commercial schools – and in the higher preparatory examination courses (HF) and in the two-year courses for the general upper secondary examination (*Studentereksamen*).

In the debate, a number of explanations have been put forward. The theoretical part of the technical schools' programmes is too difficult for the less-intellectually gifted pupils who after the end of compulsory education are disinclined to go to school and are not able to face three or four more years of education and training. The connection between the *Folkeskole* and the vocational schools could be improved; the teachers of the *Folkeskole* have themselves gone from general upper secondary education to teacher training and are not familiar with the work and methods of the vocational schools. The vocational and educational guidance of the *Folkeskole* should be strengthened, especially as far as vocational youth education is concerned.

Teaching at the vocational schools could be improved and made more differentiated, taking the different qualifications of the pupils into consideration. Pupils give up in view of the bad prospects of getting a trainee's place.

As an answer to some of these explanations and criticisms, some shorter programmes of eighteen months to two years' duration have been introduced and some experiments have been launched.

The shorter programmes prepare one for employment as an industry worker or cafeteria assistant, and the Minister of Education has pointed out that similar programmes could qualify one for employment in the tourist business, at cultural institutions, in environmental protection and at private and public service institutions.

Twenty technical schools have embarked upon an experiment together with local municipal schools where the instruction in forty classes of the tenth form of the *Folkeskole* are integrated with the first school period of the technical schools in order to facilitate the transition from general to vocational education.

As far as the drop-out problem at the courses for the higher preparatory examination (HF) is concerned the conditions at the HF courses are under consideration in order to find ways and means to reduce the present drop-out rate of 24%. The situation at the two-year courses for the *Studenterek-samen* where the drop-out rate is 50% is more difficult to cope with, as many of the students follow evening courses while at the same time having a full-time or a part-time job. It means that they have an extraordinarily heavy workload and many of them are unable to carry this load.

References

Report to the OECD, Danish Youth Education, Problems and Achievements, Ministry of Education, 1994.

Facts and Figures, Education Indicators, Denmark, Ministry of Education, 1993.

The Education System, Ministry of Education, 1992.

The Danish Gymnasium, General Rules, Ministry of Education, 1991.

The Subjects in the Danish Gymnasium, Ministry of Education, 1992.

The Danish Higher Preparatory Examination, Ministry of Education, 1993.

Selected statistical data

Table 1: Public expenditure on education and training by level (1991 prices, thousand million kroner)[1, 2]

	1982	1985	1988	1990	1991
Basic school	27.9	27.3	27.6	26.2	25.7
Youth (secondary) education	11.2	11.1	12.4	12.9	13.0
Higher education	9.6	10.1	10.6	10.9	10.6
Adult education	4.6	5.3	6.2	6.6	6.8
Administration, etc.	1.7	1.8	2.0	1.7	1.6
Total	**55.0**	**55.5**	**58.8**	**58.4**	**57.7**

1. Due to decreasing pupil numbers, the proportion of expenditure spent on basic education is gradually decreasing to the benefit of youth (secondary) education, adult education and, to a lesser extent, higher education.

2. Total expenditure on education in 1988 was 6.9% of GNP, namely the highest of all OECD countries after Canada.

Table 2: Number of educational institutions

	1974/75	1980/81	1984/85	1990/91	1992/93
Basic schools	2 362[1]	2 404	2 437	2 402	2 313
– of which private	269	305	361	409	403
Gymnasium and HF courses	125	150	165	157	152
– of which private	27	26	26	21	21
Vocational schools	156	197	213	205	202
Higher education	118	229	216	229	225

1. Figure for 1975/76.

Table 3: Pupil/teacher ratio by type of institution

	1982/83	1985/86	1986/87	1990/91	1991/92
Basic school	11.9	11.3	10.9	10.1	10.3
Gymnasium	10.2	10.3	10.1	9.5	9.2
Commercial school	-	-	12.2	12.5	12.4
Technical school	-	-	8.0	8.6	8.9

Table 4: Number of pupils by level (in 000s)

	1978/79	1982/83	1986/87	1991/92	1996/97	2001/02	2011/12
Basic school	804	770	710	617	617	663	-
General upper secondary	64	80	70	74	66	57	68
Basic vocational	26	38	38	45	43	40	50
Vocational education and training	84	99	120	104	98	89	93
Higher education	116	119	128	156	167	164	149
Total	**1 094**	**1 106**	**1 066**	**996**	**991**	**1 013**	-

Table 5: Enrolment ratios for the 15-19 and 20-24 age groups

	1978/79	1980/81	1984/85	1988/89	1990/91
15-19 age group	70	73	74	79	78
20-24 age group	26	25	26	29	30

Table 6: Students who complete a course by level (in 000s)

	1977/78	1981/82	1985/86	1989/90
Basic school	78	80	68	70
– of which general upper secondary	20	26	26	26
Vocational education	52	75	83	85
– of which basic	23	34	35	40
– of which vocational education and training	29	41	48	45

Table 7: Transitions from the education system, one and five years after graduation, according to employment status, graduates/ school-leavers in 1982/83 and 1986/87 (percentages)

From	One year after graduation			Five years after graduation		
	Unemployed	In workforce	Outside workforce	Unemployed	In workforce	Outside workforce
Basic school	23	81	19	16	69	31
General upper secondary	9	81	19	15	83	17
Vocational education	11	93	7	12	95	5
Short-cycle higher	4	95	5	6	98	2
Medium-cycle higher	4	95	5	6	98	2
Long-cycle higher	3	92	8	7	97	3
Total	**11**	**90**	**10**	**12**	91	**9**

All data from *Facts and Figures, Education Indicators, Denmark*, Ministry of Education, 1993.

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It constitutes one part of a series entitled "Guide to secondary education in Europe" developed as part of the project "A secondary education for Europe".
The aim of this series is to make accessible to the public not only a systematic and coherent exposition of the educational systems and traditions in all signatory states to the European Cultural Convention, but also to outline the essential problems these systems are facing at the present time.
Each book has been written by an expert from the country concerned on the basis of a questionnaire. The questionnaire was drawn up by Denis Kallen who has both co-ordinated the series and undertaken the editing of each text in collaboration with the author.
Given that this is an area in which changes take place particularly quickly and that the translation, revision and publication of the manuscript require a certain amount of time, there will be an opportunity to publish updated information for the Final Conference of the project in 1996.

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